

## LIFE HISTORY OF EUCHAETES EGLIENSIS AND COMPARISON WITH *E. COLLARIS*.

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*Egg.* Large, rounded conoidal with flat base, very shining, deep ochre yellow; reticulations fine, hexagonal, linear and very obscure; diameter .7 mm., height .6 mm. Laid in patches of considerable size, the several eggs not contiguous.

*Stage I.* Body pale yellow, warts large, black; feet and shields dark; joints 4 to 6 reddish, forming a band, as also joint 10, but fainter. On prothorax four setae on the shield and one detached, two on the prespiracular tubercle, two on the subventral tubercle; joints 3 and 4 with three setae from the wart ia + ib, one seta from iia, a very fine one from ib, one from iv and two from vi; no subprimary setae on the thorax. On abdomen two setae from wart i, one from ii, two from iii, one each from iv and v, two from the leg plate; the subprimary tubercle vi is present on joints 5, 6, 11 and 12 but bears no seta; vii and viii present on the apodal segments. On joint 13 the subdorsal tubercle (i + ii + iii) bears only four setae. Lobes of head black, clypeus whitish; width .5 mm.

*Stages II-IV.* As in the mature larva but the hair tufts shorter and smaller, only the dorsal ones (i-iii) with any plumed hairs, consequently appearing less hairy. The youngest ones are a little greenish. Partly gregarious at first, hanging by a thread if disturbed. The habits are much as in *E. egle*. Widths of head .7, 1, 1.5 mm.

*Stage V.* Head shining reddish orange, paler in the sutures, ocelli dusky; width 2 mm. Body orange red, a shade paler than the head, immaculate. Warts small, neat, black, the hair bunches composed of short spinulated hairs basally, feathery ones centrally, compact, subpencilled, not concealing the body; short and even, 1.5 to 2 mm long, those from warts i and ii on joints 3 and 4

longer, on 4 about twice as long, on 3 three times as long as on the others. Hair all sordid silvery gray; leg plates blackish. Tubercles i to vi normal, iv scarcely smaller than v; four warts on joints 3 and 4; cervical shield and anal plate reduced, represented each by four small warts. Joint 2 slightly retracted, considerably reduced.

*Euchaetes collaris* has the same number of stages and the same widths of head. The eggs are likewise large, rather hemispherical. In the first stage tubercle i is single-haired throughout, but otherwise the setae are just the same, with the curious non-setiferous tubercles vi on the apodal segments. The head is paler, having only a dusky shade at the vertex of each lobe. In all the subsequent stages the body is whitish and the head silvery gray, the hair tufts spreading, not pencilled, forming an even smooth coat rising about 2 mm. above the back, longer at the ends. The warts are concolorous with the body, not blackish; there are no marks. In habit the larvae differ by their tendency to concealment and are hence less often seen. They feed on the dogbane (*Apocynum*) while *E. egle* prefers milk-weed (*Asclepias*).

In previously published accounts of *E. collaris*, Jewett seems to describe four stages and Edwards implies six, but in neither case is the number definitely stated.

BUTTERFLY SOUNDS. — Carl Frings states (*Soc. ent.*, Mar. 1, 1897) that when some bred specimens of *Parnassius apollo* were disturbed, they spread their wings out flat and produced a distinct (recht laut) noise by a forcible and continued grating of the hind tibiae and tarsi against the basal field of the hind wings, which is rather thickly beset with stiff hairs.